

# Idaho Geospatial Council



## 2019 Spring Bi-Annual Meeting

# Agenda



8:30 Welcome and Introductions

8:35 IGC-EC Update

8:45 Technical Working Group Updates:

- Hydrography
- Imagery
- Public Safety
- Geodetic Control
- Elevation

9:15 GIO Update

9:30 Adjournment

## 2019 Spring IGC Meeting

# IGC – EC Updates



Wilma Robertson



# IGC Election Results

POSITION/SEAT	MEMBER
State (Seat 1)	Stephen Cox, Dept. of Agriculture
State (Seat 2)	Wilma Robertson, Dept. of Water Resources (Current CHAIR)
Federal (Seat 3)	Jerry Korol, NRCS
Federal (Seat 4)	John Koudelka, Rep. for Idaho National Laboratory
Local (Seat 5)	Cyndi Andersen, Bannock County
Local (Seat 6)	Donna Phillips, City of Hayden
Local (Seat 7)	Kelly Green, Blaine County
Tribal (Seat 8)	Laurie Ames, Nez Perce Tribe
Utility (Seat 9)	Shane Lim, Suez Water
Private (Seat 10)	Craig Campbell, Digline, Inc.
Open (Seat 11)	Pam Bond, City of Boise
Open (Seat 12)	Stewart Ward, Dioptra Geomatics

# IGC Election Results

# G-350 Methodology for recognizing

USA Geology Units 


 Map Image Layer by [Esri](#)

Updated: November 4, 2016

 Subscriber

 Living Atlas

 Authoritative

“For those Framework datasets that are published with ArcGIS Online, IGC-EC recommends that the Authoritative Source is verified by ESRI and the Authoritative Dataset is designated as  Authoritative in ArcGIS Online.”

[https://doc.arcgis.com/en/arcgis-online/administer/configure-general.htm#VERIFY\\_ORG](https://doc.arcgis.com/en/arcgis-online/administer/configure-general.htm#VERIFY_ORG)

## a TIM Framework dataset



# G-150 ITA GLOSSARY OF TERMS

## Idaho Technology Authority (ITA)

### ENTERPRISE GUIDELINES – G100 GENERAL

Category: G105 – ITA GLOSSARY OF TERMS

#### CONTENTS:

- I. [Definition](#)
- II. [Rationale](#)
- III. [Guideline](#)
- IV. [Contact Information](#)
- V. [Revision History](#)

#### I. DEFINITIONS

**Cybersecurity Breach:** A cybersecurity incident in which unencrypted sensitive information or personal information is disclosed. (See also Idaho Code section § [28-51-104](#) for breach of the security of the system.)

**Cybersecurity Event:** An unauthorized act, successful or unsuccessful, exploiting a **cybersecurity threat**, to gain access to or use of a network or system, or data stored on a network or system.

We are working towards removing all definitions from GIS policies, guidelines and standards and move them into G-150 as well.

# G-150 ITA GLOSSARY OF TERMS

# OTHER ONGOING ITEMS..

## KEEP EVERYTHING FOREVER?

- Found out that literal interpretation of old retention schedule required us to keep everything forever
- Subcommittee (Keith Weber, Bruce Godfrey, Cyndi Coulter and Donna Phillips) been working with Idaho Historical society and created "GIS Records Retention Recommendation"

1. Does GIS Record contain original materials with enduring historical value and strong Ties to Idaho?
2. Is the record in Idaho?
3. Is the data from authoritative Source?



IDAHO STATE  
**HISTORICAL**  
**SOCIETY**



# OTHER ONGOING ITEMS..

## UPCOMING MEETINGS

TODAY!!! Geodetic Control TWG Meeting

April 3: Imagery TWG

April 3: Special IGC-EC Meeting

May 9: Hydrography TWH

May 16: IGC Meeting



Shout Out

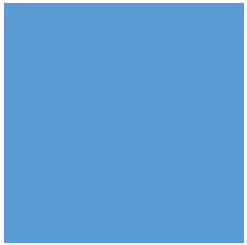


Keep up to date  
by visiting  
“gis.idaho.gov”





# TWG Updates



# Hydrography

Danielle Favreau

# Hydrography TWG Update

## ➤ Updates from Sept. Hydro TWG

- 2015 Water Use Summary
- Brief Overview of the  
National Water Water  
Model

- NHD Plus HR
- Other Updates
- Next TWG

May 9, 2019



**Minutes and Slidedecks from all Hydro TWGs:**  
<http://www.idwr.idaho.gov/GIS/NHD/hydro-TWG.html>

# Highlights from Sept. 13, 2018 Hydro TWG

## ✚ 2015 Water Use Summary

### ▣ Idaho Fact Sheet

<https://pubs.er.usgs.gov/publication/fs20183036>

## ✚ Overview of the National Water Model

### ▣ Model Real-time Output:

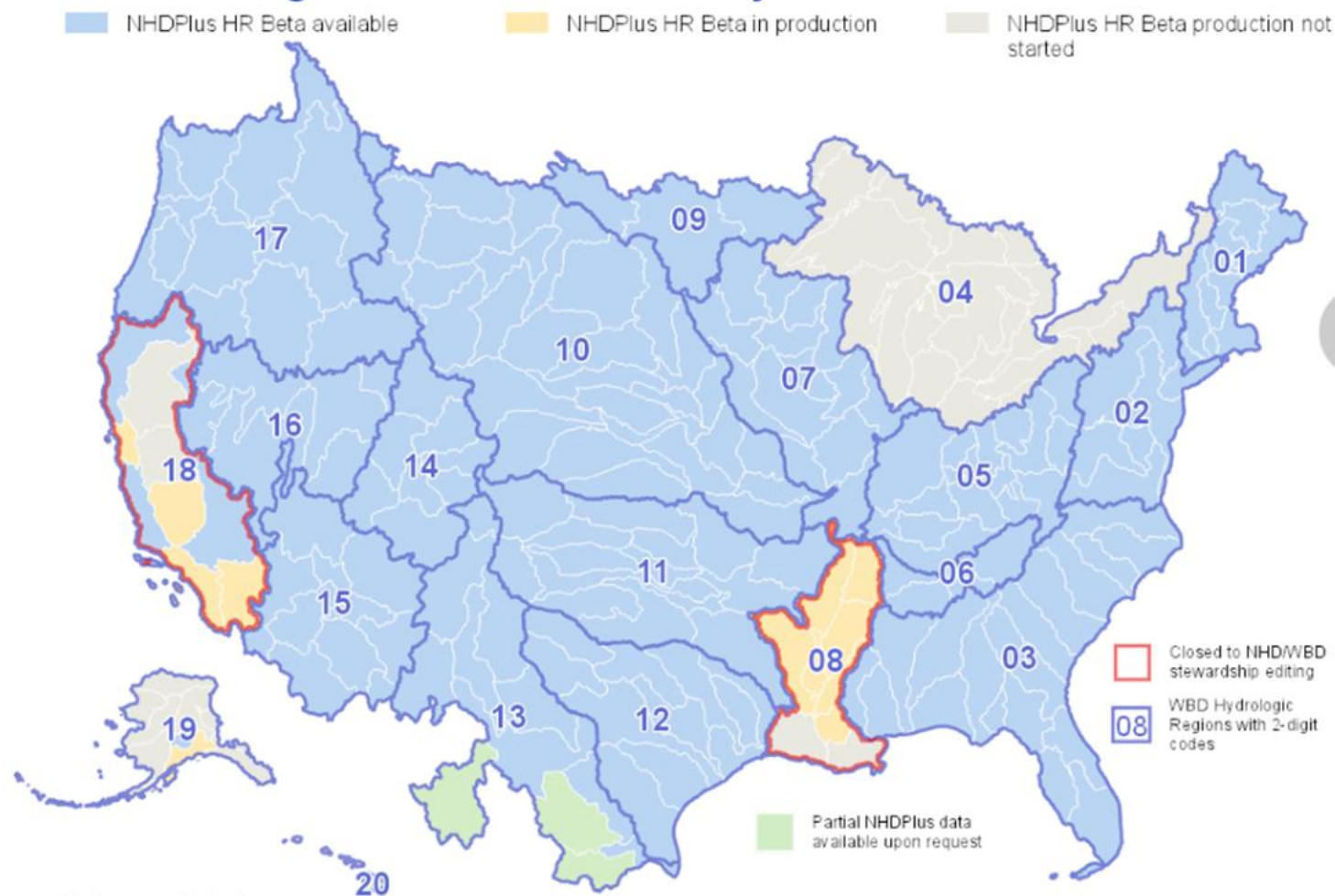
<http://water.noaa.gov/map>

### ▣ More Information:

<http://water.noaa.gov/documents/wrn-national-water-model.pdf>



## NHDPlus High Resolution Availability



# NHDPLUS HR

- What is great about the NHDPlus HR?
  - Value Added Attributes including stream order and mean annual flow values
- Now is the time to make NHDPlus HR better!
  - NHDPlus HR features USGS has prioritized for update available at:  
<https://idwr.idaho.gov/GIS/NHD/datasets.html>
- For More Information:  
<https://www.usgs.gov/core-science-systems/ngp/national-hydrography/nhdplus-high-resolution>



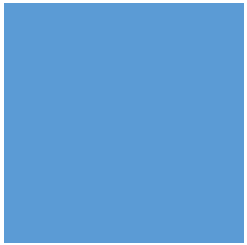
# Other Updates

- NHD Markup Application
  - Quick Edit Submission Tool
  - Edits to be reviewed at future HYDRO TWGs
- Website
  - <https://www.usgs.gov/core-science-systems/ngp/national-hydrography>



- NHD/WBD Tool Status
  - All Tools now at ArcGIS 10.5.1
  - Testing for Windows 10 Compatibility
- Interested in being a steward?
  - Email [NHD.WBD@idwr.idaho.gov](mailto:NHD.WBD@idwr.idaho.gov)
- Next Hydro TWG
  - May 9, 2019

# TWG Updates



# Imagery

Margie Wilkins

# Imagery Technical Working Group

**INSIDE Idaho:** (NAD\_1983\_Idaho\_TM)

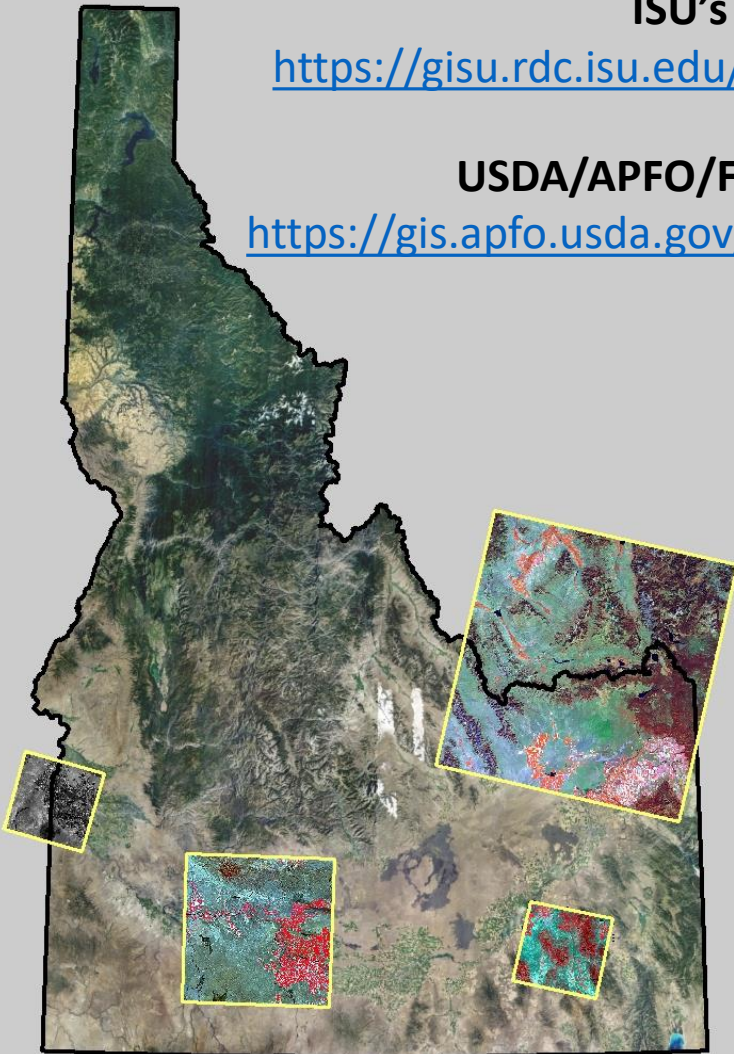
[https://www.insideidaho.org/arcgis/rest/services/imagery/idaho\\_2017/ImageServer](https://www.insideidaho.org/arcgis/rest/services/imagery/idaho_2017/ImageServer)

**ISU's GIS TReC:** (NAD\_1983\_Idaho\_TM)

<https://gisu.rdc.isu.edu/server/rest/services/NAIP2017/ImageServer>

**USDA/APFO/FSA:** (WGS\_1984\_Web\_Mercator\_Auxiliary\_Sphere)

<https://gis.apfo.usda.gov/arcgis/rest/services/NAIP/Idaho/ImageServer>



Meets Quarterly – first Wednesday of the month  
next meeting April 3, 2019

For more Imagery TWG information:  
Margie.Wilkins@idwr.idaho.gov

<https://gis.idaho.gov/TIM/imagery.html>

# H. R. 2 became Public Law No. 115-334 on 2018-12-20

## SEC. 12612. NATIONAL AGRICULTURE IMAGERY PROGRAM.

(a) IN GENERAL.—The Secretary of Agriculture, acting through the Administrator of the Farm Service Agency, shall carry out a national agriculture imagery program to annually acquire aerial imagery during agricultural growing seasons from the continental United States.

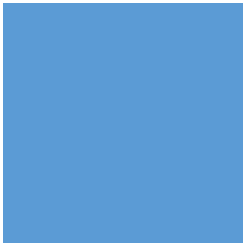
(b) DATA.—The aerial imagery acquired under this section shall—

- (1) consist of high resolution processed digital imagery;
- (2) be made available in a format that can be provided to Federal, State, and private sector entities;
- (3) be technologically compatible with geospatial information technology; and
- (4) be consistent with the standards established by the Federal Geographic Data Committee.

(c) SUPPLEMENTAL SATELLITE IMAGERY.—The Secretary of Agriculture may supplement the aerial imagery collected under this section with satellite imagery.

(d) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to carry out this section \$23,000,000 for fiscal year 2019 and each fiscal year thereafter.

# TWG Updates

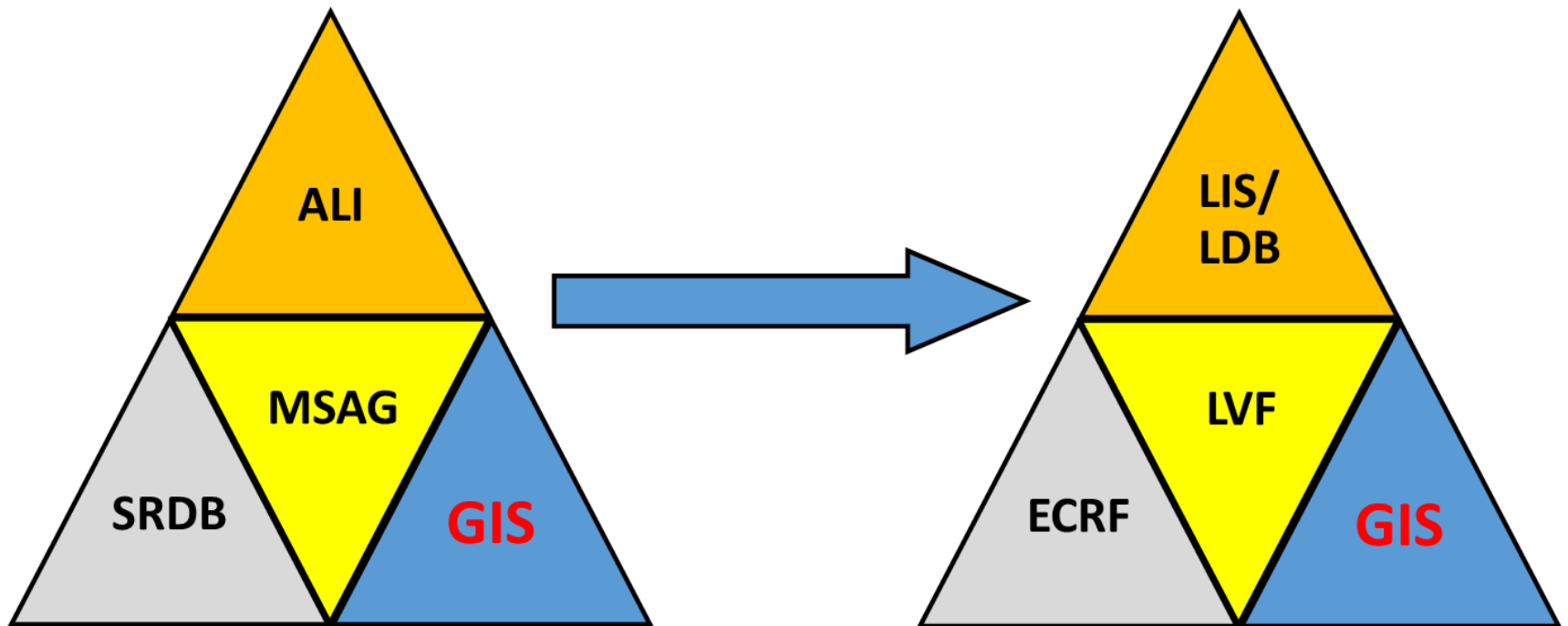


**Public Safety**

Bill Reynolds



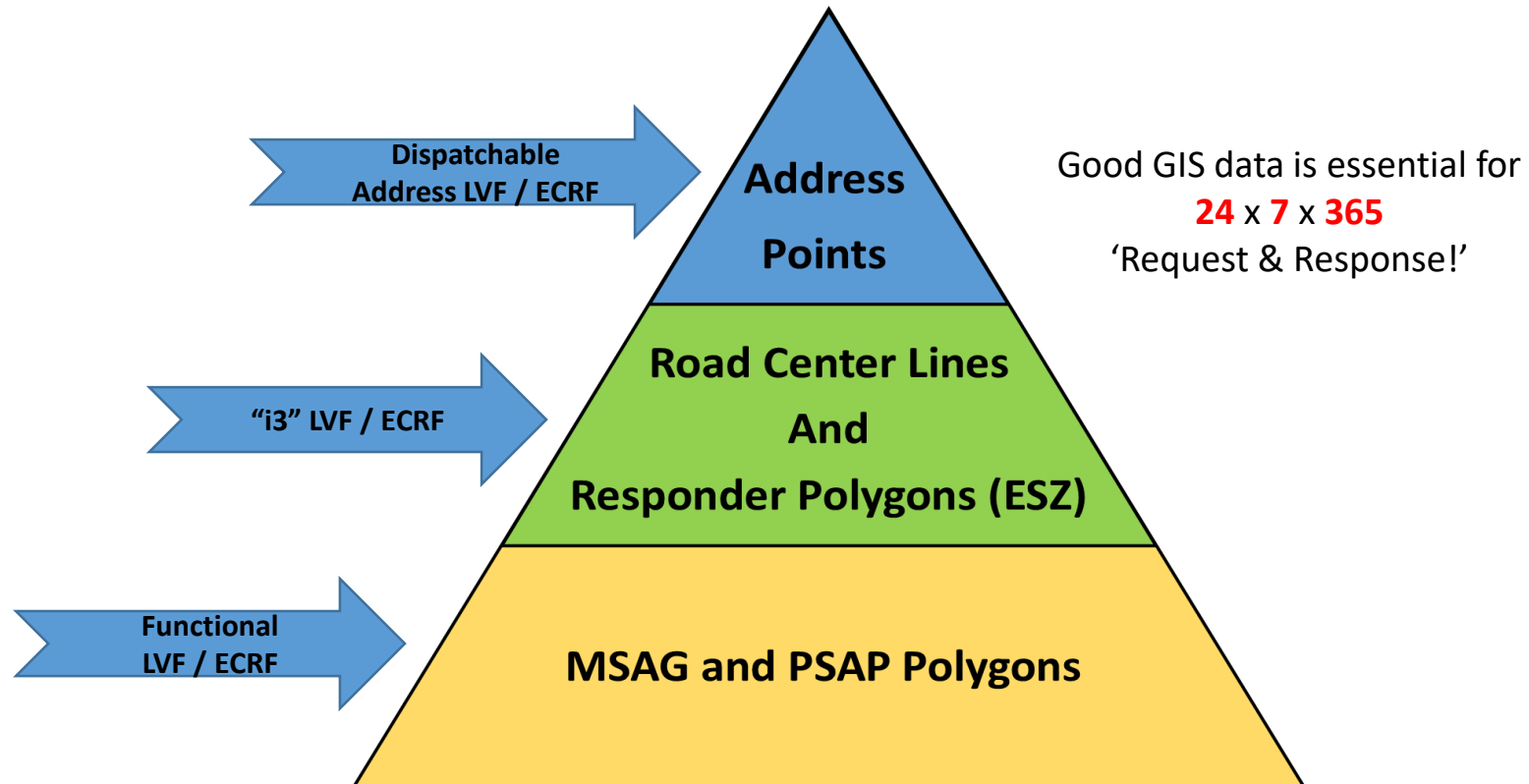
# GIS Transition to NG9-1-1



# NG9-1-1 in Idaho

- We need authoritative data
- May need MOA's / MOU's with neighbors
- SOP's with data stewards / creators
- Mapping Priorities
  - **PSAP Boundary**
  - **Emergency Service Zones**
  - **Road Centerlines**
  - **Address Points**
  - Landmarks, Parcels, Imagery, Cell Towers, Counties, Hydrology Line, Streams, Lakes, Incorporated Municipalities, Mile Markers, Railroads, States, and Unincorporated Communities
- Don't reinvent – look at novel solutions
- Maintain and update frequently

# GIS Transition to NG9-1-1



# Resources:

Idaho E911 / Public Safety Communications Commission  
<https://ioem.idaho.gov/Pages/ECC/Ecc.aspx>

Idaho ITA Public Safety Standards  
<https://gis.idaho.gov/coordination/standards.html>

NENA – National Emergency Number Association  
Standards: <https://www.nena.org/page/standards>

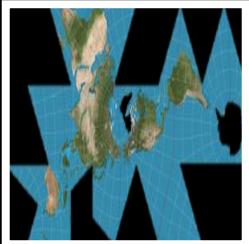
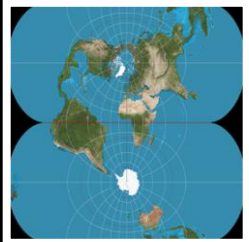
NG9-1-1 GIS Data Model  
NENA-STA-006.1-2018: <https://www.nena.org/page/NG911GISDataModel>

NG9-1-1 Civic Location Data Exchange Format (CLDXF)  
NENA-STA-004.1.1-2014: <https://www.nena.org/page/NG911CLDXF>

I3 Solution – Stage 3:  
NENA-STA-010.2-2016: [https://www.nena.org/page/i3\\_Stage3](https://www.nena.org/page/i3_Stage3)

Bill Reynolds  
Nez Perce County  
GIS Coordinator  
[billr@co.nezperce.id.us](mailto:billr@co.nezperce.id.us)

# TWG Updates



# Geodetic Control

Keith Weber



# Geodetic Control Technical Working Group

GC-TWG

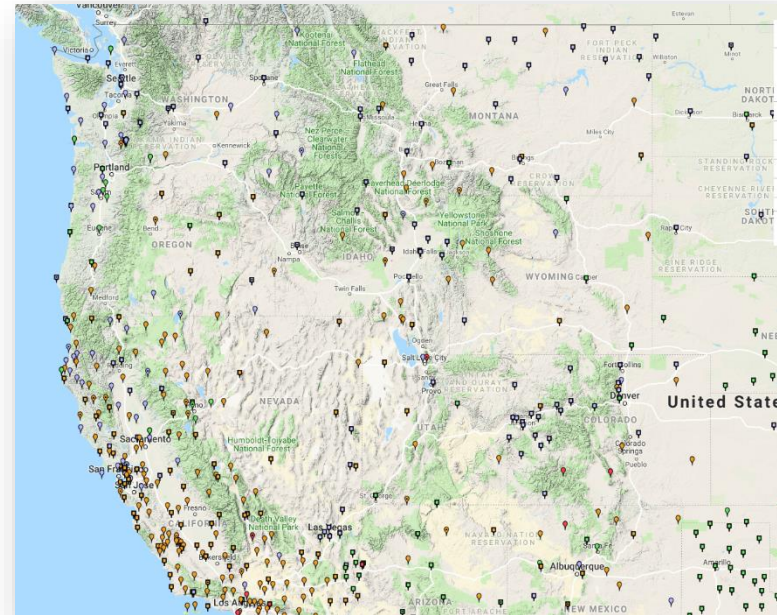
Chair: Keith T Weber, GISP

ISU GIS TReC



# The Earth is Changing

- And so is geospatial technology
- Better measurements of the earth are now available due in large part to the CORS



# What has been learned?

- Using the most current spatial reference system is important

## Life Cycle of Control Point Positions: A Case Study Using a Multi-State Control Point Database (MCPD)

Kazi Arifuzzaman and Keith T. Weber

### Abstract

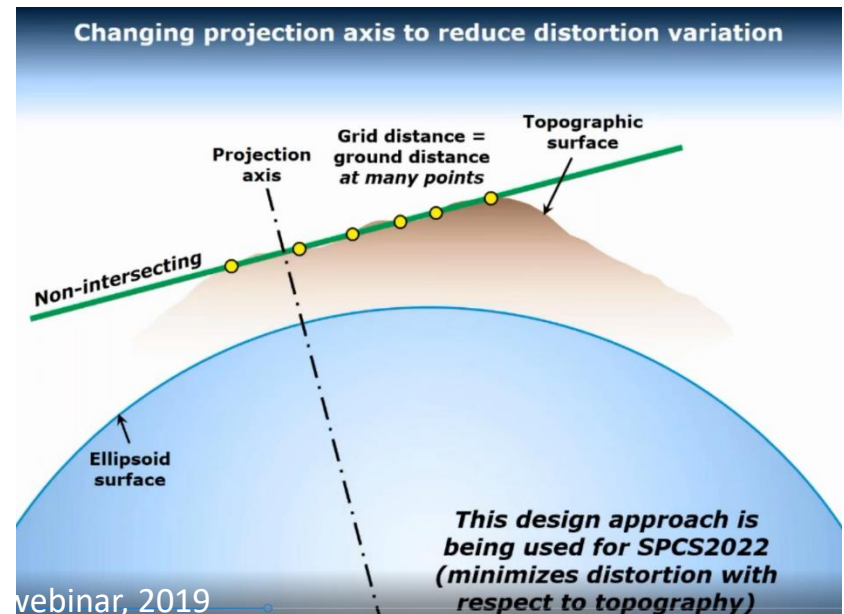
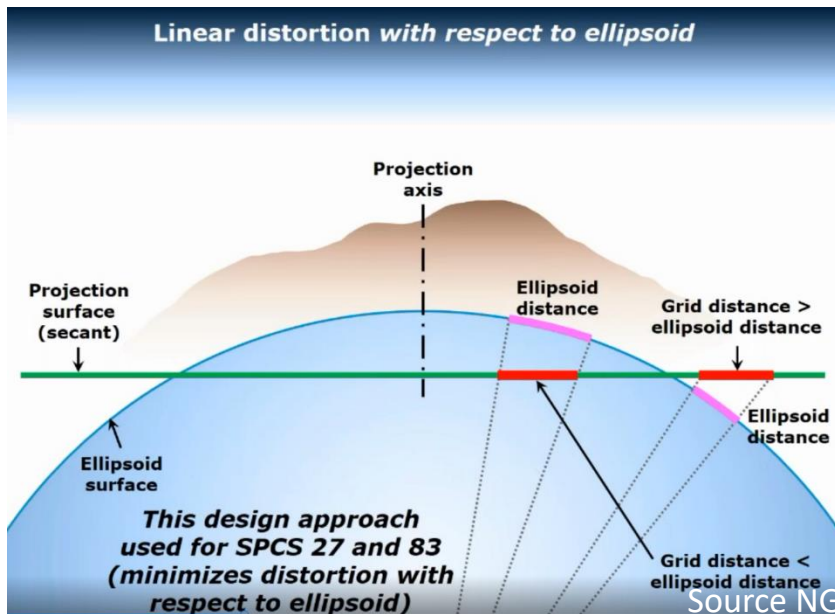
*The life-cycle (usability) of a control point's position is tied closely to the control point's stability, its datum, and velocity changes across a region due to crustal movement. Analyses of the coordinates of numerous control points stored in the Idaho and Montana Multi-State Control Point Database (MCPD) showed no statistical differences due to a point's stability and its physical setting. However, analyses comparing various realizations of horizontal datum revealed some significant differences. Specifically, there is >1 m difference observed between coordinates using NAD 83(1986) relative to NAD 83(2011) and approximately 2 cm difference between NAD 83(CORS96) and NAD 83(2011) coordinates. A comparison of vertical coordinates derived from geoid models revealed a 30 cm mean difference between GEOID03 and GEOID12A, and >60 cm difference between GEOID99 and GEOID12A. The impact of velocity on these coordinates was apparent and varies strongly with local tectonics across the eastern Idaho study area. This study supports the NGS recommendation to use the most current realization of horizontal and vertical datum available.*

highway, road, and street alignments and are usually set by transportation departments (e.g., Idaho Transportation Department (ITD)). Cadastral controls define property boundaries set for the Public Lands Survey System (PLSS) by private surveyors. The monuments which represent a section corner were originally set by surveyors from the General Land Office (GLO) and, over time, either government or private surveyors have perpetuated many of these monuments. Examples of monument types are brass caps, brass plugs, marked stones, iron pipes, concrete posts, reinforcing bars with plastic or aluminum caps, and holes drilled in rocks. According to National Geodetic Survey (NGS) criteria, these kinds of monuments are considered stability category C or D. Stability is defined as the monument's ability to maintain a long-term, constant position relative to other local features. Stability category C indicates the position may hold well, but are commonly subject to movement, whereas stability D may show unknown reliability over time (Mark Stability, NGS).

The geodetic datums used to determine the horizontal and

# What has been learned? (cont'd)

- Ellipsoid based datums, like NAD83 are *obsolete*
- Better “earth models” and approaches can be developed



# NATRF2022 and Idaho's GC-TWG

- The GC-TWG has been actively following and participating in discussions regarding NATRF2022
- Changes will impact both SPCS and IDTM
- Idaho can propose a multi-layer spatial reference
  - One statewide layer (i.e., IDTM)
  - One multi-zone layer (i.e., SPCS)



# Current Recommendations

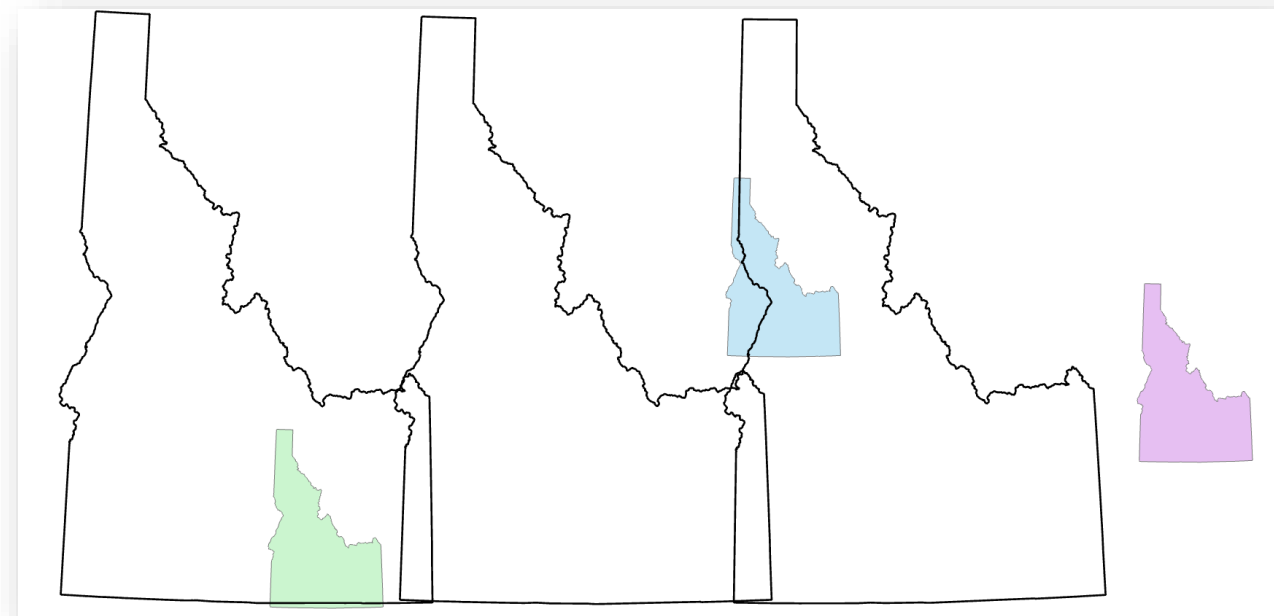
- Discussions continue with NGS regarding how IDTM will change (Transverse Mercator or Oblique Mercator)
  - POC: GC-TWG
- Similarly, discussions continue regarding multi-zone SPCS (3-zone or 9-zone)
  - POC: ISPLS

# Later Today...

- GC-TWG is hosting a special webinar with guest speaker Michael Dennis (NGS)
  - He will present on/and we will discuss both IDTM and SPCS relative to NATRF2022

# False Easting/False Northing

- `PARAMETER["False_Easting",4250000.0]`
- `PARAMETER["False_Northing",10000000.0]`
- When graphed “by the numbers...”



# GC-TWG

- Discussion/Questions?  
[webekeit@isu.edu](mailto:webekeit@isu.edu) or [giscenter@isu.edu](mailto:giscenter@isu.edu)

# TWGW Updates

Elevation



Nancy Glenn

# Idaho Lidar Plan

[https://gis.idaho.gov/coordination/Idaho\\_Statewide\\_Lidar\\_Plan\\_Final\\_2018.pdf](https://gis.idaho.gov/coordination/Idaho_Statewide_Lidar_Plan_Final_2018.pdf)

## Idaho 3D Nation Study Validation

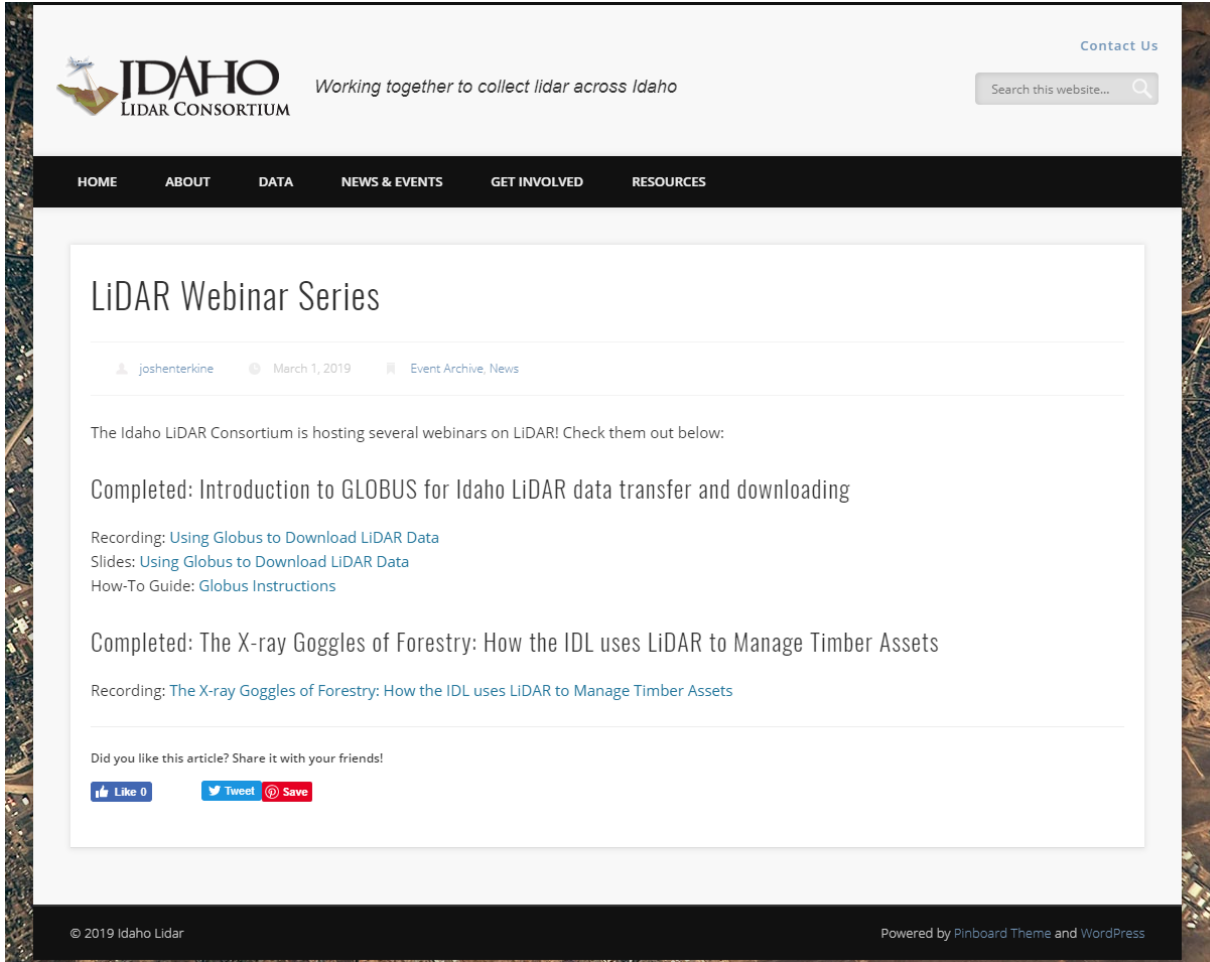
- Survey & follow-up
- Focus is on mission critical areas for Idaho

# 2019 Webinar / Workshop Series

- Funded by FEMA Region X
- Keith Weber, Zach Lifton, Nancy Glenn
- 3 webinars in Spring / Summer 2019
  - 2 complete
  - 1 coming – software for lidar analysis
- 3 workshops in Summer / Fall 2019
  - Intro to analyzing topography / veg with lidar
  - Geologic hazards



# 2019 Webinar Series



The screenshot shows the website of the Idaho LiDAR Consortium. The header includes the logo and tagline "Working together to collect lidar across Idaho", a "Contact Us" link, and a search bar. A navigation menu lists: HOME, ABOUT, DATA, NEWS & EVENTS, GET INVOLVED, and RESOURCES. The main content area is titled "LiDAR Webinar Series" and includes metadata for the author (joshenterkine), date (March 1, 2019), and category (Event Archive, News). The text states that the consortium is hosting several webinars on LiDAR. Two completed webinars are listed: "Introduction to GLOBUS for Idaho LiDAR data transfer and downloading" and "The X-ray Goggles of Forestry: How the IDL uses LiDAR to Manage Timber Assets". Each entry provides links for recording, slides, and a how-to guide. At the bottom of the article, there is a social sharing section with buttons for Like, Tweet, and Save.

IDAHO LIDAR CONSORTIUM *Working together to collect lidar across Idaho* [Contact Us](#)

Search this website...

HOME ABOUT DATA NEWS & EVENTS GET INVOLVED RESOURCES

## LiDAR Webinar Series

joshenterkine March 1, 2019 Event Archive, News

The Idaho LiDAR Consortium is hosting several webinars on LiDAR! Check them out below:

**Completed: Introduction to GLOBUS for Idaho LiDAR data transfer and downloading**

Recording: [Using Globus to Download LiDAR Data](#)  
Slides: [Using Globus to Download LiDAR Data](#)  
How-To Guide: [Globus Instructions](#)

**Completed: The X-ray Goggles of Forestry: How the IDL uses LiDAR to Manage Timber Assets**

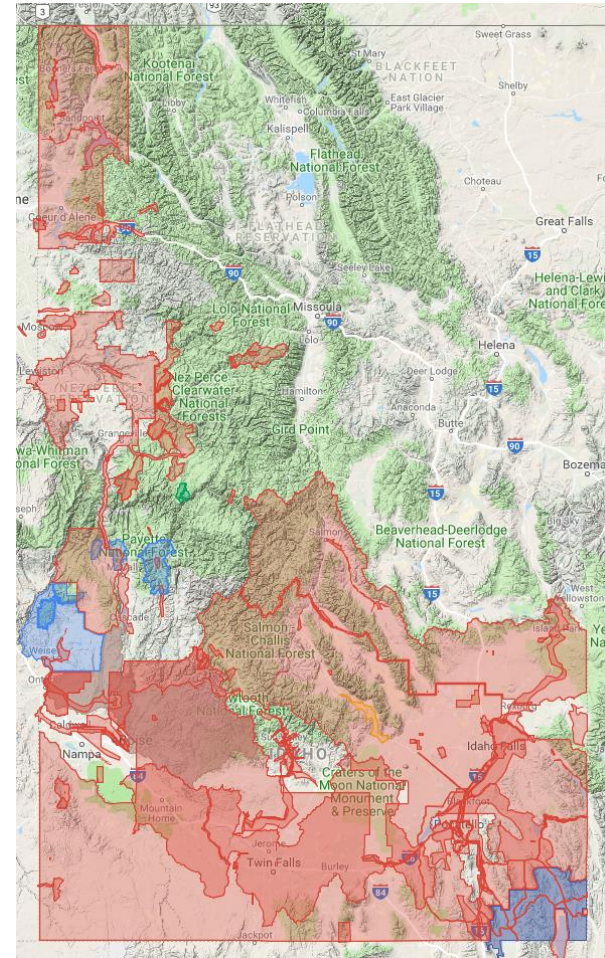
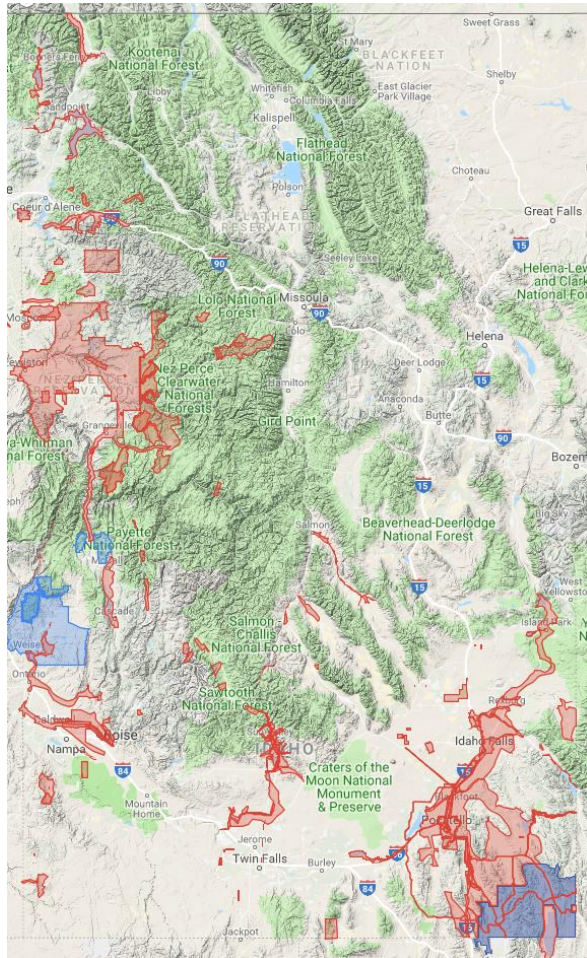
Recording: [The X-ray Goggles of Forestry: How the IDL uses LiDAR to Manage Timber Assets](#)

Did you like this article? Share it with your friends!

[Like 0](#) [Tweet](#) [Save](#)

© 2019 Idaho Lidar Powered by Pinboard Theme and WordPress

# Idaholidar.org



# Proposed, collected, & new data

Current LiDAR————Download KML: [Idaho\\_LiDAR\\_Current.kml](#)

Show  entries

Search:

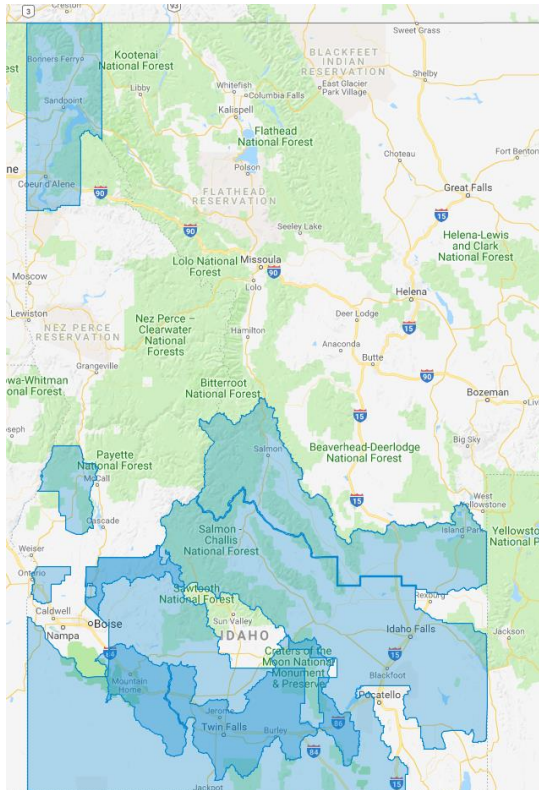
Aquisition Date	Location	Status	Raw data	Derived Products	Metadata	KML
Proposed	<a href="#">Krassell</a>	Proposed				<a href="#">KML</a>
Proposed	<a href="#">Big Lost River</a>	Proposed				<a href="#">KML</a>
Proposed	<a href="#">Nez Perce - Clearwater NF</a>	Proposed				<a href="#">KML</a>
Collected	<a href="#">FEMA Boise-Payette 2018</a>	Collected				<a href="#">KML</a>
2019	<a href="#">FEMAFY18Planned</a>	In Progress				<a href="#">KML</a>
2019	<a href="#">FEMAProposed</a>	In Progress				<a href="#">KML</a>
2018	<a href="#">Blackfoot-Portneuf FEMA 2018</a>	Current	<a href="#">Online</a>	<a href="#">Online</a>		<a href="#">KML</a>
2017	<a href="#">Payette National Forest</a>	Current	<a href="#">Online</a>	<a href="#">Online</a>		<a href="#">KML</a>



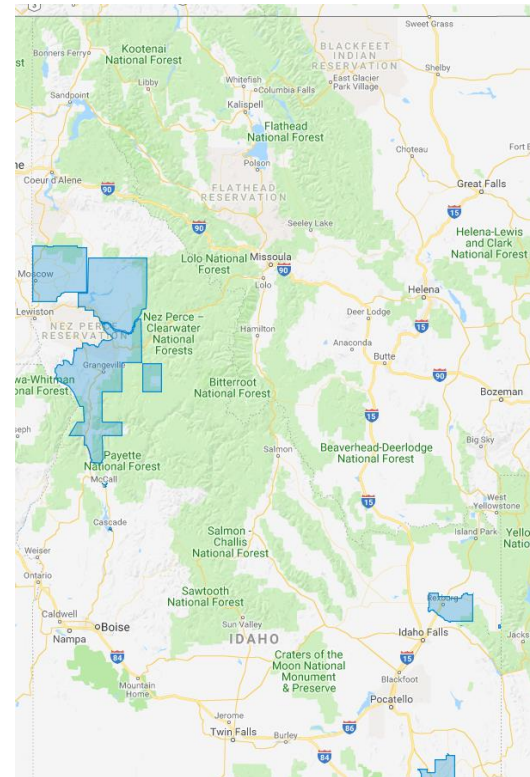
# Upcoming Opportunities, FEMA HQ, QL2

Need to know if you can partner for QL1!

## FEMA FY18 Planned



## FEMA Proposed



# Thank you!

Lidar inquiries?  
[bcal@boisestate.edu](mailto:bcal@boisestate.edu)

# GIO Update



Bill Farnsworth